

IN THE SPECIFICATION

Page 1, in the heading, please cancel "tesa Aktiengesellschaft...Description".

Page 1, before the first line of text, please insert:

--This is a 371 of PCT/EP2003/006614 filed 24 June 2003 (international filing date).--

Page 1, line 21, please insert:

--Background of the invention--

Paragraph beginning at page 1, line 22 (amended):

In the conception and design of optical components it is necessary to take account of the interaction of the materials used with the nature of the irradiated light. In one derived version the law of conservation of energy takes the form

$$T(\lambda) + p(\lambda) + a(\lambda) = 1,$$

where $T(\lambda)$ describes the fraction of light transmitted, $p(\lambda)$ the fraction of light reflected, and $a(\lambda)$ the fraction of light absorbed (λ : wavelength), and where the total intensity of the irradiated light has been normalized to 1. Depending on the application to which the optical component is put the task is to optimize individual terms among these three and to suppress the others in each case. Optical components designed for transmission ought to feature values for $T(\lambda)$ of close to 1. This is achieved by reducing the value of $p(\lambda)$ and $a(\lambda)$. PSAs based on acrylate copolymer and acrylate block copolymer normally have no significant absorption in the visible range, i.e., in the wavelength range between 400 nm and 700 nm. This can be readily ascertained by measurements with a UV-Vis spectrophotometer. The factor of particular interest, therefore, is $p(\lambda)$. Reflection is an interfacial phenomenon which depends on the refractive indices $n_{d,i}$ of two phases i in contact, according to the Fresnel equation

Page 3, line 24, please insert:

--Summary of the invention--

Paragraph beginning at page 3, line 29 (amended):

The invention accordingly provides pressure-sensitive adhesives based on one or more block copolymers, at least one block copolymer being composed at least in part on the basis of (meth)acrylic acid derivatives, the at least one block copolymer comprising at ~~least~~ least the unit P(A)-P(B)-P(A), comprising at least one polymer block P(B) and at least two polymer blocks P(A), where

- P(A) independently of one another represent homopolymer or copolymer blocks made up at least to 75% by weight of monomers of group A, the (co)polymer blocks P(A) each having a softening temperature in the range from 0°C to + 175°C,
- P(B) represents a homopolymer or copolymer block comprising monomers of group B, the (co)polymer block P(B) having a softening temperature in the range from -130°C to +10°C, and
- the (co)polymer blocks P(A) and P(B) are not homogeneously miscible with one another at 25°C,

characterized in that

- the adhesive has a refractive index $n_{d,a}$ of $n_{d,a} \geq 1.52$ at 25°C,
- at least one of the (co)polymer blocks P(A) have a refractive index $n_{d,A}$ of $n_{d,A} \geq 1.58$ at 25°C, and
- the (co)polymer block P(B) has a refractive index $n_{d,B}$ of $n_{d,B} \geq 1.43$ at 25°C.

Page 4, line 29, please insert:

--Detailed description--

Paragraph beginning at page 8, line 31 (amended):

As particularly preferred examples of monomers containing vinyl groups, in the sense of B2, for the elastomer block P(B) suitability is additionally possessed by hydroxyethyl acrylate, hydroxypropyl acrylate, hydroxyethyl methacrylate, hydroxypropyl methacrylate, ~~n~~ N-methylolacrylamide, acrylic acid, methacrylic acid, allyl alcohol, maleic anhydride, itaconic anhydride, itaconic acid, benzoin acrylate, acrylated benzophenone, acrylamide and glycidyl methacrylate, to name but a few.

Paragraph beginning on page 11, line 5 (amended):

Particularly preferred embodiments of such blends are the following:

blends of the block copolymers comprising the sequence P(A)-P(B)-P(A), corresponding to the main claim, with diblock copolymers P(A)-P(B), where to prepare the corresponding polymer blocks P(A) and P(B) the same monomers as above can be used. It may further be of advantage to add polymers P'(A) and/or P'(B) to the PSA composed of the block copolymers, in particular of triblock copolymers (I), or to the PSA composed of a block copolymer/diblock copolymer blend, for the purpose of improving its properties.

Accordingly the invention further provides PSAs based on a blend of at least one block copolymer which has a refractive index n_d at 25°C of not less than 1.52 with a diblock copolymer P(A)-P(B),

- where the polymer blocks P(A) of the diblock copolymers independently of one another represent homopolymer or copolymer blocks of the monomers of group A, the polymer blocks P(A) of the diblock copolymers each having a softening temperature in the range from 0°C to +175°C and a refractive index $n_{d,B}$ $n_{d,A}$ of not less than 1.58,
 - and where the polymer blocks P(B) of the diblock copolymers independently of one another represent homopolymer or copolymer blocks of the monomers of group B, the polymer blocks P(B) of the diblock copolymers each having a softening temperature in the range from -130°C to +10°C and a refractive index ~~$n_{d,A}$~~ $n_{d,B}$ of not less than 1.43,
- and/or with polymers P(A) and/or P(B),

- where the polymers P(A) represent homopolymer and/or copolymers of the monomers of group A, the polymers P(A) each having a softening temperature in the range from 0°C to +175°C and a refractive index $n_{d,A'}$ of not less than 1.58,
- where the polymers P(B) represent homopolymers and/or copolymers of the monomers of group B, the polymers P(B) each having a softening temperature in the range from -130°C to +10°C and a refractive index $n_{d,B'}$ of not less than 1.43,
- and where the polymers P'(A) and P'(B) are preferably miscible with the polymer blocks P(A) and P(B), respectively, of the block copolymers corresponding to the main claim.

Paragraph beginning on page 14, line 7 (amended):

More preferred as controlled regulators for the polymerization of compounds of the following type are:

- 2,2,5,5-tetramethyl-1-pyrrolidinyloxy (PROXYL), 3-carbamoyl-PROXYL, 2,2-dimethyl-4,5-cyclohexyl-PROXYL, 3-oxo-PROXYL, 3-hydroxyimine-PROXYL, 3-aminomethyl-PROXYL, 3-methoxy-PROXYL, 3-t-butyl-PROXYL, 3,4-di-t-butyl-PROXYL
- 2,2,6,6-tetramethyl-1-piperidinyloxy ~~pyrrolidinyloxy~~ (TEMPO), 4-benzoyloxy-TEMPO, 4-methoxy-TEMPO, 4-chloro-TEMPO, 4-hydroxy-TEMPO, 4-oxo-TEMPO, 4-amino-TEMPO, 2,2,6,6-tetraethyl-1-piperidinyloxy, 2,2,6-trimethyl-6-ethyl-1-piperidinyloxy
- N-tert-butyl-1-phenyl-2-methyl propyl nitroxide
- N-tert-butyl-1-(2-naphthyl)-2-methyl propyl nitroxide
- N-tert-butyl-1-diethylphosphono-2,2-dimethyl propyl nitroxide
- N-tert-butyl-1-dibenzylphosphono-2,2-dimethyl propyl nitroxide
- N-(1-phenyl-2-methyl propyl)-1-diethylphosphono-1-methyl ethyl nitroxide
- di-t-butyl nitroxide
- diphenyl nitroxide
- t-butyl-t-amyl nitroxide

Paragraph beginning at page 19, line 32 (amended):

For the optional crosslinking with ~~W~~ UV light, UV-absorbing photoinitiators are added to the polyacrylate-containing block copolymers employed in the systems of the invention. Useful photoinitiators which can be used to great effect are benzoin ethers, such as benzoin methyl

ether and benzoin isopropyl ether, for example, substituted acetophenones, such as 2,2-diethoxyacetophenone (available as Irgacure 651 from Ciba Geigy®), 2,2-dimethoxy-2-phenyl-1-phenylethanone, dimethoxyhydroxyacetophenone, substituted α -ketols, such as 2-methoxy-2-hydroxypropiophenone, aromatic sulfonyl chlorides, such as 2-naphthylsulfonyl chloride, and photoactive oximes, such as 1-phenyl-1,2-propanedione 2-(O-ethoxycarbonyl)oxime.

`Paragraph beginning on page 20, line 19 (amended):

In principle it is also possible to crosslink the pressure-sensitive adhesives used in accordance with the invention using electron beams. Typical irradiation devices which may be employed are linear cathode systems, scanner systems, and segmented cathode systems, in the case of electron beam accelerators. A detailed description of the state of the art, and the most important process parameters, can be found in Skelhorne, Electron Beam Processing, in Chemistry and Technology of UV and EB Formulation for Coatings, Inks and Paints, Vol. 1, 1991, SITA, London. The typical acceleration voltages are situated within the range between 50 kV and 500 kV, preferably between 80 kV and 300 ~~W~~ kV. The scatter doses used range between 5 to 150 kGy, in particular between 20 and 100 kGy.

Page 32, in the heading, please cancel "Claims", and substitute:

-- We claim:--